



Focus on River and Stream Water Quality Monitoring

from Ecology's Environmental Assessment Program, Freshwater Monitoring Unit



The Washington State Department of Ecology has conducted monthly water-quality monitoring at hundreds of streams throughout the state since 1959.

Currently, Ecology's Freshwater Monitoring Unit collects water samples from 20 *basin* stations for one year and 62 *long-term* stations for a longer period (see map on reverse side of this page). Most of these samples are collected from highway bridges.



Measured indicators of water quality include temperature, pH, conductivity, dissolved oxygen, turbidity, total suspended solids, fecal-coliform bacteria, ammonia, nitrate-nitrite, total nitrogen, total phosphorus, soluble-reactive phosphorus, and stream flow. Dissolved metals also are monitored every other month at a few stations. We occasionally sample for other water-quality indicators to address specific needs.



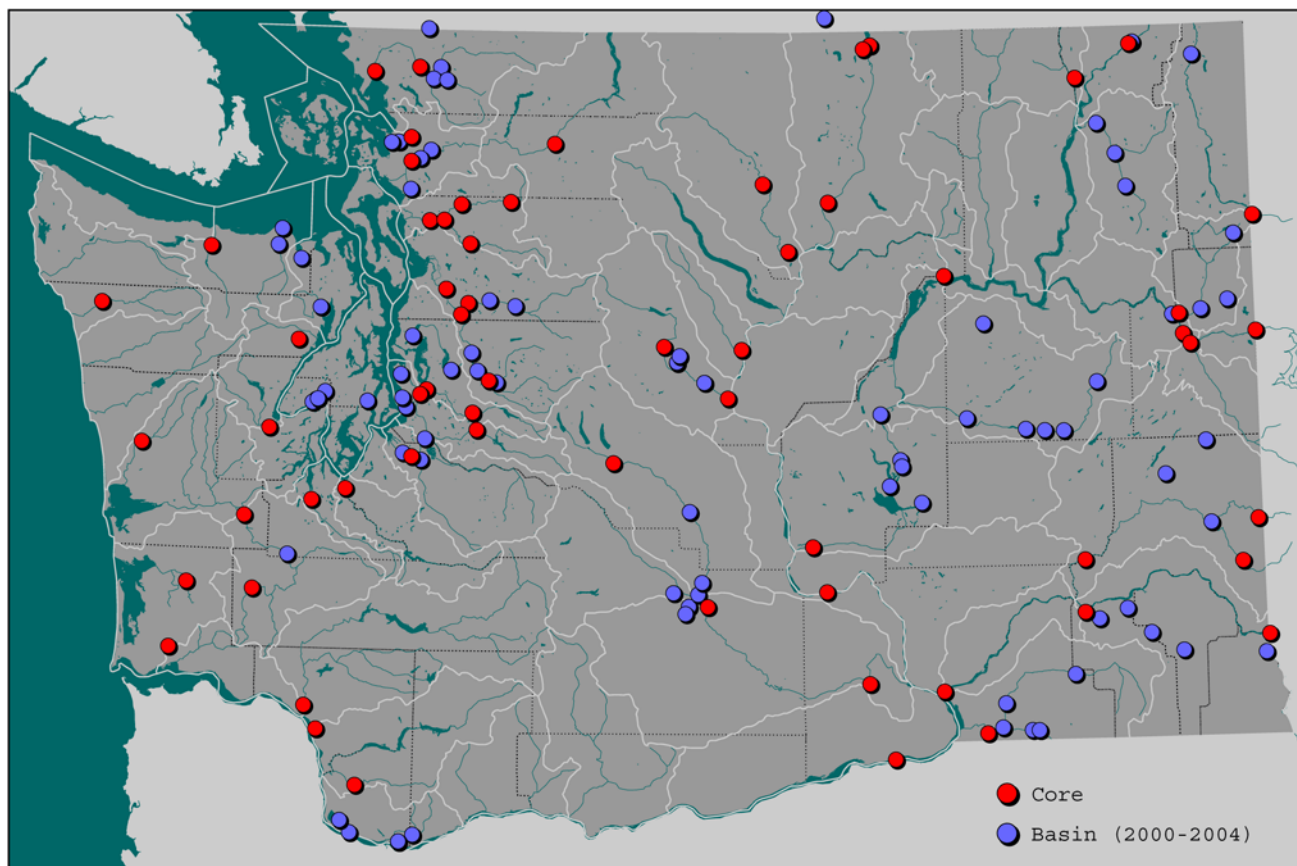
In addition, we have been assessing stream biological health since 1993 by evaluating stream insects (benthic macroinvertebrates). Because the stream insects are affected by changes in the physical and chemical environment of the stream, the results can be used to identify degraded streams and sources of pollution and to help determine how to improve stream conditions.



In 2001 the Freshwater Monitoring Unit implemented a new program to measure stream temperature every 30 minutes at most monitoring stations from June through September. In 2003 we also began measuring stream dissolved oxygen every 30 minutes at a few stations.

Information about Ecology's ongoing monitoring programs, including *River and Stream Water Quality* and *Stream Biological Monitoring*, can be found on the Web at <http://www.ecy.wa.gov/programs/eap/index.html>.

Map showing regions, watersheds, and recent stream-monitoring stations



Core = 62 long-term stations
Basin = 91 stations sampled in 2000-04

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- Southwest: Chad Wiseman, 360-407-6682
- Central: Chris Coffin, 509-454-4257
- Eastern: Jim Ross, 509-329-3425

For other surface-water monitoring information by topic, contact:

- | | |
|---|------------------------------------|
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| • Data quality/summaries/management | Dave Hallock, 360-407-6681 |
| • Lake water quality | Maggie Bell-McKinnon, 360-407-6124 |
| • Randomized water quality/habitat/biological | Glenn Merritt, 360-407-6621 |
| • Stream macroinvertebrates | Chad Wiseman, 360-407-6682 |
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